

CLAIMS

1. Use of a polynucleotide fragment or fragments comprising *SEMCAP3*, *N33*, *GRIK4*, *NPAS3*, *PDE4B* and/or *CDH8* gene(s) or a fragment(s), derivative(s) or homologue(s) thereof for the manufacture of a medicament for treating schizophrenia and/or affective psychosis in a subject.
2. Use according to claim 1 wherein the *SEMCAP3* nucleotide fragment comprises the sequence found in the public database under accession number AF127084 - AF127088, KIAA1095, AB029018, XM_041363 or BC014432 or the sequence shown in Figure 3.
3. Use according to either of claims 1 or 2 wherein the *N33* polynucleotide fragment comprises the sequence found in the public database under accession number U42349 or BAC RP11-23;14 or the sequences shown in Figures 6 or 7.
4. Use according to any preceding claim wherein the *GRIK4* polynucleotide fragment comprises the sequence found in the public database under accession number NM_014619 or the sequences shown in Figures 10 or 16.
5. Use according to any preceding claim wherein the *NPAS3* polynucleotide fragment comprises the sequence found in the public database under accession number AB054575 or AF164438 or the sequences shown in Figures 18 or 20.
6. Use according to any preceding claim wherein the *PDE4B* comprises the sequence as shown in Figures 25, 27 or 29.
7. Use according to any preceding claim wherein the *CDH8* polynucleotide comprises the sequence found in the public database under accession number L34060, AB035305, NM_001796, AB010436, AB010437, BAC CTC-420A11 or AC040161 or as shown in Figure 35.

8. Use of a polypeptide fragment or fragments comprising *SEMCAP3*, *N33*, *GRIK4*, *NPAS3*, *PDE4B* and/or *CDH8* gene(s) or a fragment(s), derivative(s) or homologue(s) thereof for the manufacture of a medicament for treating schizophrenia and/or affective psychosis in a subject.
9. Use according to claim 8 wherein the *SEMCAP3* polypeptide fragment comprises the sequence found in the public database under accession number AAF22131, AAF22132 or XP_041363, or as shown in Figure 4.
10. Use according to either of claims 8 or 9 wherein the *N33* polypeptide fragment comprises the sequence found in the public database under accession number Q13454 or as shown in Figures 6 or 7.
11. Use according to any one of claims 8 to 10 wherein the *GRIK4* polypeptide fragment comprises the sequence found in the public database under accession number NM_014619, or as shown in Figures 11 and 17.
12. Use according to any one of claims 8 to 11 wherein the *PDE4B* polypeptide fragment comprises the sequence as shown in Figures 26, 28 or 30.
13. Use according to any one of claims 8 to 12 wherein the *CDH8* polypeptide fragment comprises the sequence found in the public database under accession number NP_001787 or as shown in Figure 36.
14. Use according to any preceding claim wherein the polynucleotide fragment or polypeptide fragment consists essentially of the identified sequences.
15. A method of diagnosing schizophrenia and/or affective psychosis or susceptibility to schizophrenia and/or affective psychosis in an individual, wherein the

method comprises determining if *SEMCAP3*, *N33*, *GRIK4*, *NPAS3*, *PDE4B* and/or *CDH8* gene(s) in the individual has/have been disrupted by a mutation or chromosomal rearrangement.

16. The method according to claim 15 wherein any disruption is determined by detecting a relative level of mRNA expressed by the/said *SEMCAP3*, *N33*, *GRIK4*, *NPAS3*, *PDE4B* and/or *CDH8* gene(s).

17. The method according to claim 15 wherein a level of the/said *SEMCAP3*, *N33*, *GRIK4*, *NPAS3*, *PDE4B* and/or *CDH8* gene products are detected by an immunological technique.

18. The method according to claim 17 wherein an antibody or antibodies specific for the/said gene(s) is used to detect said gene product(s).

19. Use of an antibody or antibodies specific for *SEMCAP3*, *N33*, *GRIK4*, *NPAS3*, *PDE4B* and/or *CDH8* for diagnosis of schizophrenia and/or affective psychosis.

20. Use of an antibody or antibodies specific for *SEMCAP3*, *N33*, *GRIK4*, *NPAS2*, *PDE4B* and/or *CDH8* for the manufacture of a medicament for the treatment of schizophrenia and/or affective psychosis.

21. An animal model for psychiatric disorders wherein the animal model has been generated by specifically disruption expression of the/said *SEMCAP3*, *N33*, *GRIK4*, *NPAS2*, *PDE4B* and/or *CDH8* gene(s).

22. An animal model for psychiatric disorder wherein the animal model has been generated by specifically upregulating expression of the/said *SEMCAP3*, *N33*, *GRIK4*, *NPAS2*, *PDE4B* and/or *CDH8* gene(s).

23. A method for identifying ligands for *SEMCAP3*, *N33*, *GRIK4*, *NPAS2*, *PDE4B* and/or *CDH8* gene(s) products, said method comprising the steps of:

- a) introducing into a suitable host cell a polynucleotide fragment according to the invention;
- b) culturing cells under conditions to allow expression of the polynucleotide fragment;
- c) optionally isolating the expression product;
- d) bringing the expression product (or the host cell from step b)) into contact with potential ligands which will possibly bind to the protein encoded by said polynucleotide fragment from step a);
- e) establishing whether a ligand has bound to the expressed protein; and
- f) optionally isolating and identifying the ligand.